

[Title of the Document] ABSTRACT

A control system which is capable of enhancing both the stability and the accuracy of control when the output of a controlled object is feedback-controlled by a plurality of control inputs. An ECU 2 of a control system 1 controls engine speed NE during idling by an ignition control input Usl\_ig and an intake control input Usl\_ar. The ECU 2 calculates a target engine speed NE\_cmd according to an engine coolant temperature TW and the like (step 3), and determines the ignition control input Usl\_ig and the intake control input Usl\_ar with a plurality of predetermined target value filter-type two-degree-of-freedom sliding mode control algorithms [equations (1) to (12)] sharing one switching function  $\sigma$  ne therebetween, such that the engine speed NE converges to the target engine speed NE\_cmd (steps 4 to 7 and 9).